

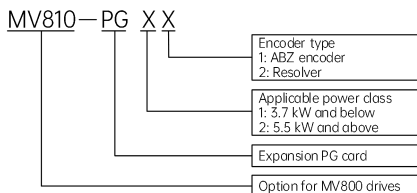
MV800 Resolver PG Card User Manual

BOM code: R33011132

Version: V02

1 Product Information

1.1 Designation rule



1.2 Function

MV810-PG*2 card is an option for encoders of MV800 drives. It provides the resolver interface, including excitation signals EXC+/- and feedback signals SIN+/- and COS+/-, serving as the speed/position feedback.

1.3 Appearance

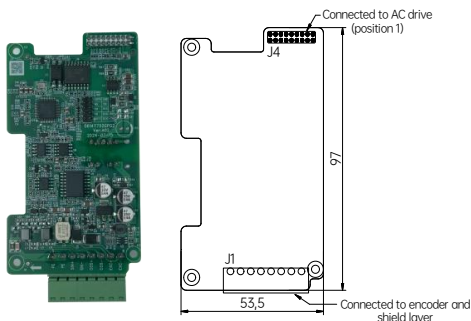


Fig. 1-1 PG card appearance

1.4 Terminal description

The terminal block of MV810-PG*2 is illustrated as below:

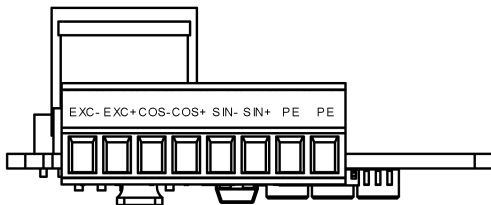


Fig. 1-2 Terminal mark

MV810-PG*2 terminal definitions are explained in Table 1-1 below.

Table 1-1 PG*2 terminal functions

Type	Terminal mark	Name	Function	Specification
Encoder card	SIN+ SIN-	Encoder SIN+/-	Encoder SIN feedback input	10 kHz
	COS+ COS-	Encoder COS+/-	Encoder COS feedback input	
	EXC+ EXC-	Encoder EXC+/- excitation	Excitation signal output for external encoders	10 Vp-p (7 Vrms) ±10% 10 kHz
	PE	PE connection	Connected to the encoder shield	-
	PE	PE connection	Connected to the AC drive ground (PE)	-

1.5 Signal

The excitation signal EXC and the feedback signal SIN/COS of MV810-PG*2 are shown as below:

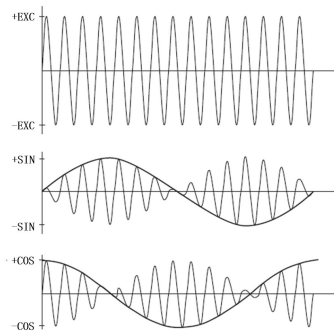


Fig. 1-3 Resolver signal

Note:

- ① When the motor is running forward, the COS signal is 90° ahead of the SIN signal; when the motor is running reversely, the SIN signal is 90° ahead of the COS signal.
 - ② The resolver selected must meet the parameter requirements of MV810-PG*2. Especially, the input excitation DC resistance shall be greater than $17\ \Omega$; otherwise, MV810-PG*2 may not be able to function properly.
 - ③ To prevent overload of MV810-PG*2 due to resolver selection with excessive pole pairs, it is recommended that the number of pole pairs shall be no more than four.
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1.6 Function codes

Table headers for the function codes are described below.

Header	Definition
Default	It is the value when the function code is restored to factory settings.
Property	○: The function code can be changed during running; ×: The function code can be changed during stop; *: The function code is read only and not allowed for change.

Function code	Name	Range	Default	Property
P04.00	Encoder PPR	1 to 65535	1024	×
P04.01	Encoder type	0: None 1: ABZ incremental encoder 2: Resolver	0	○
P04.02	Encoder direction	0: Forward 1: Reverse Note: Rotation auto-tuning automatically detects the phase sequence.	0 to 1	○
P04.07	Initial position of synchronous motor	The initial position of synchronous motor corresponding to the absolute encoder: 0 to 360.0	0	×
P04.08	Resolver correction enable	0: Disable 1: Enable	0 to 1	○

2 Installation

The installation method of MV810-PG*2, including the installation position, interface, and steps, is described as below.

2.1 Installation position

The MV800 series drive provides two positions for accessory cards and options, as shown in Fig. 2-1 position 1 and position 2 (taking enclosure B as an example, similar for other enclosures), where position 1 is for the installation of various PG cards, and position 2 is for the installation of PN options, ECAT options, I/O options, and so on.

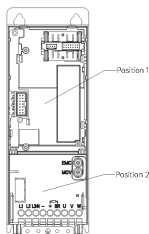


Fig. 2-1 Installation positions for accessory cards and options

2.2 Installation interface

The PG card is connected to the drive through the following interface.

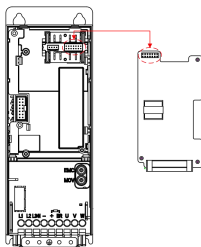


Fig. 2-2 Electrical interface for PG card installation

2.3 Installation steps

Installation direction: back side mounting (PG card)

- (1) When the drive is powered off, press the granulated part on the middle-upper of the lower cover, slide it down firmly to take down the cover, as shown in Fig. 2-3 a.
- (2) Use a straight screwdriver to pry open the two snap-fit joints between the control box and the drive, and then remove the control box upwards, as shown in Fig. 2-3 b and c.
- (3) Install the PG card: hold the PG card with its terminal block downwards, then align the three round holes on the PG card with the location column, and press down to buckle the PG card firmly into the four snap-fit joints, as shown in Fig. 2-3 d.
- (4) After the PG card is installed, align the control box with the snap-fit joints, and press down the control box to make its lower part firmly buckled, then slide the lower cover to lock it on the drive, as shown in Fig. 2-3 e and f.

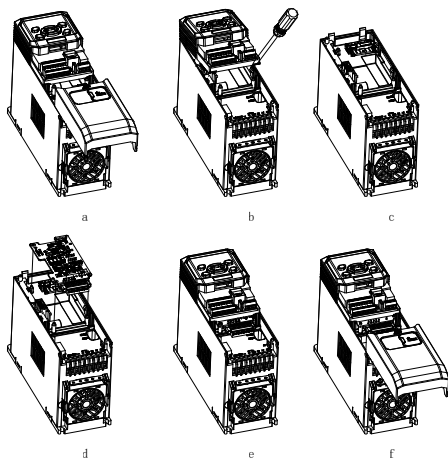


Fig. 2-3 Position 1 - PG card installation steps

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